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## Abstract

data communications system, a first node transmits an output digital signal to a second node through a transmission line and receives an input digital signal from the second node through a reception line, a signal processing amplification block of the data communications system compensates an attenuation in the input digital signal and prevents a crosstalk between the transmission line and the reception line, and a regulating block for preventing a crosstalk receives a branch signal generates a control signal based on a capacity of the branch signal.